**ONLINE APPENDIX:**

**MEASURES**

Trait Aggression Question-Wording (BPAQ-SF)

|  |
| --- |
| For each of the following statements, indicate whether the statement istrue or false for you.  |
| Physical AggressionThere are people who have pushed me so far that we have come to blows. Given enough provocation, I may hit a person. I have threatened people I know. Verbal AggressionI often find myself disagreeing with people. I can’t help getting into arguments when people disagree with me. My friends say I’m somewhat argumentative. AngerI have trouble controlling my temper. Sometimes I fly off the handle for no good reason. I flare up quickly but get over it quickly. HostilityAt times I feel I have gotten a raw deal out of life. Other people always seem to get the breaks. I wonder why sometimes I feel so bitter about things.  |  |
| Response scale: Completely true for me, Mostly true for me, Slightly true for me, Slightly false for me, Mostly false for me, Completely false for me |

*Note*. BPAQ-SF (Bryant & Smith, 2001). Item order was randomized in both studies. Subscale labels were not included in the display.

Campaign Participation Question Wording

So far as you know now, do you expect to vote in the national election this coming November or not?

Not eligible to vote

Definitely will vote

Probably will vote

Maybe will vote

Probably will not vote

Definitely will not vote

During the election campaign, do you think you will try to persuade people why they should vote for or against one of the parties or candidates?

Definitely yes

Probably yes

Maybe

Probably not

Definitely not

During the campaign, do you expect to contribute time or money to a political party or candidate?

Definitely yes

Probably yes

Maybe

Probably not

Definitely not

During the campaign, do you expect to wear a campaign button, put a campaign sticker on your car, or place a sign in your window or in front of your house?

Definitely yes

Probably yes

Maybe

Probably not

Definitely not

During the campaign, do you expect to go to any political meetings, rallies, speeches, dinners, or things like that in support of a particular candidate or party?

Definitely yes

Probably yes

Maybe

Probably not

Definitely not

During the campaign, do you expect to discuss politics with your family and friends?

Definitely yes

Probably yes

Maybe

Probably not

Definitely not

**Figure A1: Marginal Treatment Effects of Aggressive Metaphors on Voter Turnout Intentions by Trait Aggression and Participation Motives**

Study 1 Study 2

** **

*Note*: The graphs are based on the second and fourth columns of coefficients in Table I (three-way interaction models). The y-axis shows the marginal treatment effect of aggressive metaphors on predicted values of voting intentions, compared to the control, at each level of trait aggression (x-axis), and given high or low participatory motivation levels. Dashed lines indicate the treatment effect for low-motivation citizens (0), and solid lines show the effect for high-motivation citizens (1). Stars indicate regions of treatment effects that are statistically *distinct from zero* significance based on 95% confidence intervals (one-sided). Pluses indicate regions of 90% confidence. However, the key hypothesis tests involve the statistical significance of the *distance between these two lines* within each panel of the figure (shown in Figure 1 of the main text), representing the change in impact of participatory motives (solid line minus dashed line; change in size of the motives coefficient).

**Figure A2: Histograms of Trait Aggression**

Study 1



Study 2

****

**ADDITIONAL MODELS**

**Table A1: Ordered Probit Voting Models**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Study 1 Vote Intention |  | Study 2 Vote Intention |
| Aggressive Metaphors | .87^(.52) | 1.81\*(.63) |
| Trait Aggression | 1.15(1.03) | 2.15^(1.18) |
| Participation Motivation | 2.72\*(.65) | 4.55\*(1.17) |
| Trait Aggression\*Motivation | -4.62\*(1.98) | -6.37\*(2.68) |
| Aggressive Metaphors\*Trait Aggression | -3.83\*(1.52) | -3.83(1.44) |
| Aggressive Metaphors\*Motivation | -1.75^(.94) | -3.48\*(1.35) |
| Aggressive Metaphors\*Trait Aggression\*Motivation | 7.65\*(2.84) | 7.23\*(3.23) |
| Cut 1 | -.82(.36) | .28(.53) |
| Cut 2 | -.24(.35) | .63(.53) |
| Cut 3 | .26(.35) | .97(.53) |
| Cut 4 | .78(.35) | 1.65(.54) |
|  |  |  |
| *Pseudo R*2 | .06 | .06 |
| *N* | 496 | 396 |

*Note*: Ordered probit models for vote intention. “Aggressive Metaphors” in Study 1 represents the effect of randomized exposure to a single message with aggressive language (0, 1). In Study 2, the variable represents the randomized effect of exposure to one or two messages with aggressive language (0, 1). *\* p* < .05, ^ *p* < .10, two-sided.

**Table A2: Ordered Probit Model for Non-Voting Participation**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Study 1 Non-Voting Participation (1 item) |  | Study 2 Non-Voting Participation  (5 items) |
| Aggressive Metaphors | .75(.49) | 1.14\*(.53) |
| Trait Aggression | 2.89\*(.95) | 1.57(1.09) |
| Participation Motivation | 3.09\*(.55) | 2.58\*(.90) |
| Trait Aggression\*Motivation | -5.94\*(1.76) | -2.89(2.33) |
| Aggressive Metaphors\*Trait Aggression | -3.32\*(1.46) | -2.74\*(1.29) |
| Aggressive Metaphors\*Motivation | -1.58\*(.81) | -1.53(1.03) |
| Aggressive Metaphors\*Trait Aggression\*Motivation | 7.00\*(2.55) | 4.98^(2.77) |
|  |  |  |
| Cut 1 | 1.42 (.33) | -.19 (.45) |
| Cut 2 | 2.35 (.33) | .13 (.45) |
| Cut 3 | 3.02 (.34) | .55 (.45) |
| Cut 4 | 3.55 (.35) | .90 (.45) |
| Cut 5 |  | 1.18 (.45) |
| Cut 6 |  | 1.37 (.45) |
| Cut 7 |  | 1.60 (.45) |
| Cut 8 |  | 1.79 (.46) |
| Cut 9 |  | 1.97 (.46) |
| Cut 10 |  | 2.11 (.46) |
| Cut 11 |  | 2.33 (.46) |
| Cut 12 |  | 2.51 (.46) |
| Cut 13 |  | 2.70 (.46) |
| Cut 14 |  | 2.84 (.46) |
| Cut 15 |  | 3.03 (.47) |
| Cut 16 |  | 3.20 (.47) |
| Cut 17 |  | 3.34 (.47) |
| Cut 18 |  | 3.51 (.48) |
| Cut 19 |  | 3.70 (.48) |
| Cut 20 |  | 3.91 (.49) |
|  |  |  |
| *Pseudo R*2 | .05 | .02 |
| *N* | 502 | 396 |

*Note*: Ordered probit models for non-voting participation. “Aggressive Metaphors” in Study 1 represents the effect of randomized exposure to a single message with aggressive language (0, 1). In Study 2, the variable represents the randomized effect of exposure to one or two messages with aggressive language (0, 1).. *\* p* < .05, ^ *p* < .10, two-sided.

**Models with disaggregated motivation index**

**Table A3: Conditional Effects of Aggressive Metaphors, Trait Aggression, and Participatory Motivations on Voter Turnout Intentions**

|  |  |  |
| --- | --- | --- |
|  | PID Strength | External Efficacy |
|  | Study 1  | Study 2 | Study 1  | Study 2 |
| Aggressive Metaphors | .00(.10) | .51\*(.12) | .18\*(.08) | .25\*(.11) |
| Trait Aggression | -.27(.22) | .27(.26) | .09(.16) | .24(.24) |
| Participation Motivation | .14(.10) | .68\*(.15) | .41\*(.10) | .42^(.22) |
| Trait Aggression\*Motivation | .01(.33) | -.45(.41) | -.85\*(.33) | -.97^(.57) |
| Aggressive Metaphors\*Trait Aggression | -.31(.29) | -.93\*(.32) | -.55\*(.24) | -.68\*(.29) |
| Aggressive Metaphors\*Motivation | -.00(.14) | -.62\*(.18) | -.38\*(.15) | -.42(.25) |
| Aggressive Metaphors\*Trait Aggression\*Motivation | .52(.44) | 1.01\*(.50) | 1.23\*(.47) | 1.32^(.69) |
| Constant | .80\*(.07) | .36\*(.10) | .70\*(.05) | .65\*(.10) |
| *R*2 | .10 | .18 | .08 | .06 |
| *N* | 496 | 396 | 496 | 396 |

*Note*: OLS models for vote intention. Results are equivalent with ordered probit, but presented as OLS for consistency with index models. “Aggressive Metaphors” in Study 1 represents the effect of randomized exposure to a single message with aggressive language (0, 1). In Study 2, the variable represents the randomized effect of exposure to one or two messages with aggressive language (0, 1). *\* p* < .05, ^ *p* < .10, two-sided.

**Table A4: Conditional Effects of Aggressive Metaphors, Trait Aggression, and Participatory Motivations on Non-Voting Participation**

|  |  |  |
| --- | --- | --- |
|  | PID Strength | External Efficacy |
|  | Study 1  | Study 2 | Study 1  | Study 2 |
| Aggressive Metaphors | -.02(.09) | .20\*(.10) | .13^(.07) | .12(.09) |
| Trait Aggression | .46\*(.20) | .25(.21) | .15(.15) | .12(.20) |
| Participation Motivation | .35\*(.10) | .34\*(.12) | .41\*(.09) | .20(.17) |
| Trait Aggression\*Motivation | -.90\*(.31) | -.37(.35) | -.50^(.30) | -.30(.47) |
| Aggressive Metaphors\*Trait Aggression | -.20(.28) | -.48^(.26) | -.31(.22) | -.28(.23) |
| Aggressive Metaphors\*Motivation | -.04(.13) | -.16(.14) | -.33\*(.14) | -.09(.20) |
| Aggressive Metaphors\*Trait Aggression\*Motivation | .59(.41) | .57(.42) | .92\*(.42) | .54(.55) |
| Constant | .04(.07) | .07(.08) | .06(.05) | .21\*(.08) |
| *R*2 | .07 | .12 | .08 | .05 |
| *N* | 502 | 396 | 502 | 396 |

*Note*: OLS models for non-voting participation. “Aggressive Metaphors” in Study 1 represents the effect of randomized exposure to a single message with aggressive language (0, 1). In Study 2, the variable represents the randomized effect of exposure to one or two messages with aggressive language (0, 1). *\* p* < .05, ^ *p* < .10, two-sided.

**Table A5: Additive Effects of Aggressive Metaphor Exposure, Trait Aggression, and Participatory Motivations on Non-Voting Participation**

|  |  |  |
| --- | --- | --- |
|  | Study 2 Vote Intention | Study 2 Non-Voting Participation |
| Aggressive Metaphors | .62\*(.19) | .21(.15) |
| Trait Aggression | .42(.26) | .17(.21) |
| Participation Motivation | .78\*(.21) | .39\*(.17) |
| Trait Aggression\*Motivation | -.94^(.57) | -.24(.45) |
| Aggressive Metaphors\*Trait Aggression | -1.67\*(.52) | -.57(.41) |
| Aggressive Metaphors\*Motivation | -1.01\*(.35)  | -.19(.28)  |
| Aggressive Metaphors\*Trait Aggression\*Motivation | 2.67\*(1.06) | .83\*(.84) |
| Constant | .34\*(.11) | .10\*(.08) |
| *R*2 | .12 | .10 |
| *N* | 396 | 396 |

*Note*: OLS models for vote intention & non-voting participation index. In Study 2, the variable represents the randomized effect of exposure to zero, one, or two messages with aggressive language (0, .5, 1). *\* p* < .05, ^ *p* < .10

**Table A6: Conditional Effects of Aggressive Metaphors, Trait Aggression, and Participation Motives on Disaggregated Non-Voting Participation**

|  |  |  |
| --- | --- | --- |
|  | Study 1 | Study 2  |
|  | Contribute | Contribute | Persuade | Sign/Button | Attend | Discuss |
| Aggressive Metaphors | .14(.11) | .22(.13) | .17(.14) | .16(.14) | .16(.12) | .22(.15) |
| Trait Aggression | .61\*(.21) | .35(.28) | .23(.29) | .23(.29) | .38(.26) | .36(.30) |
| Participation Motivation | .69\*(.12) | .57\*(.23) | .31(.24) | .50\*(.24) | .40^(.21) | .52\*(.25) |
| Trait Aggression\*Motivation | -1.28\*(.40) | -.58(.62) | -.06(.64) | -.54(.63) | -.63(.55) | -.83(.66) |
| Aggressive Metaphors\*Trait Aggression | -.58^(.31) | -.52(.34) | -.40(.35) | -.39(.35) | -.46(.31) | -.80\*(.36) |
| Aggressive Metaphors\*Motivation | -.32^(.18)  | -.32(.27) | -.06(.28) | -.20(.28) | -.17(.24) | -.29(.29) |
| Aggressive Metaphors\*Trait Aggression\*Motivation | 1.36\*(.56)  | .96(.73) | .47(.76) | .83(.75) | .74(.66) | 1.42^(.78) |
| Constant | -.12(.07) | -.10(.12) | .13(.12) | -.01(.12) | -.03(.11) | .32\*(.12) |
| *R*2 | .12 | .07 | .07 | .07 | .05 | .08 |
| *N* | 502 | 399 | 402 | 402 | 402 | 403 |

*Note*: OLS models for non-voting participation. “Aggressive Metaphors” in Study 1 represents the effect of randomized exposure to a single message with aggressive language (0, 1). In Study 2, the variable represents the randomized effect of exposure to one or two messages with aggressive language (0, 1). *\* p* < .05, ^ *p* < .10, two-tailed.

**Table A7: Conditional Effects of Aggressive Metaphors, Trait Aggression, and Participation Motives on Voter Turnout Intentions with Additional Controls**

|  |  |  |
| --- | --- | --- |
|  | Study 1 Vote Intention | Study 2 Vote Intention |
| Aggressive Metaphors | .00(.04) | .22\*(.11) | .07(.05) | .46\*(.14) |
| Trait Aggression | -.11(.09) | .37^(.22) | .07(.13) | .54^(.28) |
| Participation Motivation |  | .44\*(.12) |  | .85\*(.23) |
| Trait Aggression\*Motivation |  | -.92\*(.41) |  | -.96\*(.60) |
| Aggressive Metaphors\*Trait Aggression | .02(.12) | -1.05\*(.32) | -.16(.15) | -.92\*(.34) |
| Aggressive Metaphors\*Motivation |  | -.40\*(.18) |  | -.85\*(.27) |
| Aggressive Metaphors\*Trait Aggression\*Motivation |  | 2.05\*(.57) |  | 1.68\*(.72) |
| **Education** (0=HS or <, .5=some college, 1=college grad) | .20\*(.04) | .19\*(.04) | .18\*(.05) | .18\*(.05) |
| **Income** (Quartiles) | .11\*(.04) | .09\*(.03) | .14\*(.04) | .11\*(.04) |
| **Race** (White) | .04(.03) | .05^(.03) | .00(.03) | .00(.03) |
| **Sex** (Female) | .04^(.02) | .03(.02) | .04(.03) | .05^(.03) |
| **Age** (Years) | .004\*(.0008) | .004\*(.0007) | .004\*(.0009) | .004\*(.0009) |
| Constant | .41\*(.06) | .20\*(.08) | .37\*(.08) | .00(.13) |
| *R*2 | .20 | .26 | .17 | .22 |
| *N* | 496 | 496 | 396 | 396 |